CHILDREN'S HEALTH AND CHILD–PARENT RELATIONSHIPS AS PREDICTORS OF PROBLEM-DRINKING MOTHERS' AND FATHERS' LONG-TERM ADAPTATION

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ABSTRACT: *This study examined the extent to which children's health status and child–parent relationships affected the severity of problem-drinking parents' alcohol use disorders, as well as the parents' psychological states and marital stressors and resources. These issues were examined using data from an 8-year study of problem-drinking women and men. Generally, over the 8-year period, the children of alcoholic mothers and fathers were comparable on their health status and relationships with their parents. The severity of mothers' and fathers' drinking problems were also generally comparable over this period. Better children's health and child–parent relationships at baseline and 1- and 3-year follow-ups were consistent predictors of mothers' reduced drinking and better psychological states on the subsequent follow-ups. Associations between children's functioning and fathers' adaptation were few and inconsistent. The results support the possibility that an undesirable cycle might be established in which maternal drinking and children's dysfunction coexist in an ever worsening reciprocal relationship.*

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There are 28 million children of alcoholics in the United States (see Woodside et al., 1993). Extensive research on children of parents with alcohol use disorders has shown that these children are at risk for psychosocial dysfunction in comparison to children of parents who do not have drinking problems (Sher, 1991). However, the question of how children influence their parents' drinking patterns and psychological distress has received little attention. The research literature's emphasis on the adverse effects of parental drinking problems on children neglects the role of children in a mutual influence system. According to reciprocal effects models, not only do parents affect child behavior and parent–child interactions, but child functioning also serves to elicit parental reactions.

For this study, we selected mothers and fathers who participated in an 8-year study of problem-drinking women and men, none of whom had received formal treatment for their alcohol problems at the start of the project. To assess the extent to which children influence the severity of their parents' disorders over time, we examined the predictive associations between children's health status and child–parent relationships and the severity of problem-drinking parents' alcohol use disorders. We also focused on the extent to which children's health and their relationships with parents were associated with parents' psychological states (symptoms of depression, self-esteem), and their chronic marital stressors and stable marital resources. Relationships between children's health status, child–parent relationships, and parental adaptation were examined separately for mothers and fathers. To more fully understand the course of mothers' and fathers' drinking outcomes with regard to children, we also compared mothers and fathers at baseline and each follow-up on the child-related variables, as well as on the types and amounts of alcoholism treatment they received, and on adaptation indices.

Children's Health and Parental Adaptation

Children's medical, emotional, or behavior problems may serve as stressors that precipitate or intensify parental drinking and distress. For example, Pelham and Lang (1993) found that, after adults interacted with a child confederate who behaved as though he had an attention deficit or conduct disorder, they consumed more alcohol than they did after interacting with a normal confederate, and reported more depression, anxiety, and hostility. In addition, fathers of boys with externalizing disorders had an elevated prevalence of alcohol problems (Biederman et al., 1990; Stewart et al., 1980). According to Moos et al. (1990b), children's physical and mental health problems were related to more alcohol consumption and more depression among alcoholic parents assessed at 2 years post-treatment.

Children's hospitalization also may be an important stressor to which problem-drinking parents respond by consuming more alcohol and functioning more poorly. Woodside et al. (1993) found that children of alcoholics enter inpatient hospital facilities at a greater rate than other children, and stay in the hospital longer. Even though part of the greater rate of hospitalization may be due to alcoholic parents' physical abuse of their children (see Reich et al., 1988), it is probable that a child's hospitalization and distress have a detrimental influence on the parent.

Parent–Child Relationships and Parental Adaptation

Interpersonal stressors play an important role in precipitating alcoholic relapses (Marlatt and Gordon, 1985), and alcoholic parents' home environments are characterized by child–parent conflict and limited support (Reich et al., 1988; Roosa et al., 1993). We tested the hypothesis that parents who were more satisfied with their relationships with their children would be more successful at reducing both drinking and chronic stressors, and would improve in their psychological and marital resources. In contrast, we expected that parents who experience more stressors in their relationships with their children would deteriorate over time on drinking and psychological patterns, and show increased chronic marital stressors and reduced marital resources.

Differences Between Mothers and Fathers

Women problem drinkers have more psychological problems, such as depression and low self-esteem, than men problem drinkers do (Beckman and Amaro, 1986). Robbins (1989) found stronger associations of family arguments with alcohol problems in community samples of women than among men. In a mixed sample of problem and non-problem-drinking mothers, positive mother–child relationships contributed substantially to mothers' better psychological adjustment (Dumka and Roosa, 1993). This link was not found in a mixed sample of problem and non-problem-drinking fathers, however (Dumka and Roosa, 1995).

Other work has examined gender differences in treatment-seeking for alcohol problems. For example, in the full sample from which parents were drawn for this study, women were more likely than men to enter treatment for problem-drinking (Timko et al., 1993). In contrast, in research using retrospective data, Ross (1989) found that roughly equal proportions of women and men alcoholics seeking treatment had previously attended Alcoholics Anonymous (AA) or received inpatient services for drinking.

Previous research has not directly compared child–mother and child–father relationships among problem-drinking individuals as we do in this study. Such comparisons are of interest in themselves, and help to discern why mothers may show stronger associations than do fathers between family relationships and drinking and psychological outcomes. That is, problem-drinking mothers may have both more extreme (positive or negative) family relationships and stronger associations of family relationships with outcomes than do problem-drinking fathers; alternatively, child–parent relationships may be comparable between problem-drinking mothers and fathers, and yet influence mothers more strongly. We also build on previous work by including child health status as a potential explanatory factor of parents' well-being.

In summary, the purposes of this study were two-fold: (1) to compare problem-drinking mothers and fathers on child health status, child–parent relationships, treatment experiences, and drinking, psychological, stressor, and resource outcomes at baseline and at 1-, 3-, and 8-year follow-ups; and (2) to examine associations of child health status and parent–child relationships with parental adaptation.

METHOD

Sample and Procedure

The sample consisted of all parents who participated in a larger study of problem drinkers (see Timko, 1998, for a review of project results to date). At baseline, data were collected from a total of 631 individuals after their initial contact with an Information and Referral (I&R) center or detoxification (detox) program. The initial data collection process at the I&R centers and detox programs is described in detail in Timko et al. (1993) and Timko et al. (1994). Participants had not received prior formal inpatient or outpatient treatment for problem-drinking; those with previous exposure to AA were accepted into the study. All participants provided informed consent.

FOLLOW-UPS

One, three, and eight years after entering the study, located participants were contacted by telephone when possible and then mailed an inventory that was almost identical in content to the initial inventory. The overall 8-year follow-up rate for those persons not known to have died was 80 percent (N = 466). Compared with individuals who completed only the baseline assessment, those who also completed the 1-, 3-, and/or 8-year follow-ups were somewhat more educated and likely to be employed, and had somewhat less severe drinking problems (Timko et al., 1995, 1999). (For more details on the follow-ups, see Timko et al., 1994, 1995, 1999.)

For the purposes of this study, analyses predicting parents' outcomes from child-related indices were conducted on the following groups: (a) mothers (n = 146) and fathers (n = 113) who completed the baseline and 1-year follow-up surveys, (b) mothers (n = 129) and fathers (n = 96) who completed 1- and 3-year follow-ups, and (c) mothers (n = 120) and fathers (n = 102) who completed the 3- and 8-year follow-ups. The mothers and fathers were not from the same families.

Of the 146 mothers in the first group, their average age at baseline was 37; most of the mothers were white (85%), had graduated from high school (79%), and were unemployed (66%). Whereas 30 percent were married, 12 percent were never married, 55 percent were separated or divorced, and 3 percent were widowed; 42 percent were single mothers (i.e., were unmarried and their children lived full-time with them). Of the 113 fathers in the first group, their average age at baseline was 38; most of the fathers were white (73%), had a high school education (75%), and were unemployed (57%). Fully 36 percent were married, whereas 10 percent were never married, 52 percent were separated or divorced, and 2 percent were widowed; 19 percent were single fathers. Mothers and fathers assessed comparable numbers of children residing with them; on average, mothers had 2.10 children (range = 1 to 6) and fathers had 2.32 children (range = 1 to 8).

Measures

CHILDREN'S HEALTH STATUS

Measures of children's health status were taken from the Health and Daily Living (HDL) Form by Moos et al. (1990a). At each assessment, the parents were asked to list up to three significant medical, emotional, or behavioral problems their children had

experienced in the past year. *Child Health Problems* was scored dichotomously, with 0 designating no such problems, and 1 designating one or more such conditions. *Child Hospitalization* indicated whether or not any of the respondent's children had been hospitalized during the past year (0 = no, 1 = yes). Herjanic and Reich (1982) reported that inter-rater reliability on child health indices (e.g., among children, parents, clinicians) tends to be higher when the focus of ratings is on the presence or absence of problems, rather than on severity or number. Significant inter-parent agreement was found on the HDL's child health indices by Billings and Moos (1986).

PARENT–CHILD RELATIONSHIP

Child Relationship Stressors was the sum of 6 five-point items (0 = never, 4 = often), drawn from the Life Stressors and Social Resources (LISRES) Inventory (Moos and Moos, 1994), assessing stressors in the respondent's relationships with children at home (e.g., children misbehave or disobey). Cronbach's alpha at baseline was 0.81. *Child Relationship Satisfaction* was assessed by a single item asking the extent to which respondents were satisfied with the relationships they had with their children (1 = very dissatisfied, 2 = somewhat dissatisfied, 3 = somewhat satisfied, 4 = very satisfied).

PARENTS' DRINKING PATTERNS AND PROBLEMS

At baseline and at each follow-up, participants were asked about how much wine, beer, and hard liquor they usually drank on the days during the past month that they had consumed each type of alcoholic beverage. Responses for wine, beer, and hard liquor were coded as ounces of ethanol and summed to obtain the average amount of ethanol consumed on drinking days. Participants also indicated the number of days they were drunk or intoxicated during the past month (0–30), and the extent to which they drank heavily during the past 6 months (range = 0, did not drink at all, to 30, regular drinking binges).

An index of *problems arising from drinking* was taken from the HDL Form by Moos et al. (1990a). Participants rated how often (on a five-point scale, with 0 = never and 4 = often) in the last 6 months they had experienced each of nine problems (e.g., with health, job, money) as a result of drinking. Responses were summed so that higher scores represented more drinking-related problems (alpha at baseline = 0.80).

Symptoms of alcohol dependence were assessed by items from the Alcohol Dependence Scale by Skinner and Allen (1982) that were identified as focusing on withdrawal symptoms. On the same five-point scale, participants rated how often during the past 6 months they had experienced each of 11 symptoms as a result of drinking (e.g., had "shakes" when sobering up; had blackouts; had a craving for a drink the first thing after waking up). Responses were summed so that higher scores represented more symptoms of alcohol dependence (alpha at baseline = 0.88).

Confidence in resisting alcohol was assessed in regard to four types of situations: those involving negative emotions (sum of eight items), interpersonal conflict (nine items), positive emotions (two items), and testing one's self-control (one item). Items were drawn from the Situational Confidence Questionnaire (Annis and Graham, 1988), a self-efficacy measure with demonstrated validity (Miller et al., 1989). Each item was rated on a six-point scale (0 = not at all confident, 5 = very confident). The sum of responses to all 20 items represented a global confidence index (alpha = 0.97).

Generally, the HDL's indices of drinking patterns and problems are stable over intervals of up to 8 years (Moos et al., 1990b). In addition, problem-drinking individuals and collaterals show significant agreement on HDL drinking indices, which supports the concurrent validity of the measures (Finney and Moos, 1995).

PARENTS' PSYCHOLOGICAL STATES

Psychological well-being was assessed in two areas.

1. *Depression.* Based on the HDL's measure of depression, which was derived from the Research Diagnostic Criteria of Spitzer et al. (1978), participants rated how often (on a five-point scale with 0 = never, 4 = often) they experienced each of nine symptoms of depressed mood during the last month (e.g., feeling sad or blue; feeling guilty, worthless or down; thoughts about death or suicide). Responses were summed so that higher scores represented more depressed mood (alpha = 0.92).
2. *Self-esteem.* Participants completed the Self-Esteem Scale by Rosenberg (1965), which consists of 10 items (e.g., I feel that I have a number of good qualities; I am able to do things as well as most other people) rated on a four-point scale (0 = strongly disagree, 3 = strongly agree). Items were summed so that higher scores represented more self-esteem (alpha = 0.85).

These two indices are stable over intervals up to 6 years, and are predictably associated with other indices of depression and other mental health indices (Moos et al., 1990a,b).

MARITAL STRESSORS AND RESOURCES

An adapted version of the LISRES Inventory (Moos and Moos, 1994) was used to assess chronic stressors and social resources in the domain of spouse/partner. *Spouse/partner stressors* (alpha = 0.81) is the sum of five items (e.g., spouse disagrees on important issues) rated on a five-point scale (0 = never, 4 = often). *Spouse/partner resources* (alpha = 0.91) is the sum of 10 items (e.g., count on spouse to help you) rated on the same five-point scale.

In summary, mothers and fathers completed measures of their children's health and child–parent relationships, and of their own drinking, psychological well-being, and marital stressors and resources.

Statistical Methods

First, *t*-tests were used to compare mothers and fathers on the baseline and follow-up child and parent variables. We next conducted partial correlations to examine the extent to which children's health and child–parent relationships predicted parents' adaptation. Partial correlations were conducted using the SPSS "partial correlation" command, which is explained fully in the SPSS User Guides. The first set of partial correlations used children's health problems or hospitalization, or child–parent stressors or satisfaction, at baseline to predict mothers' and fathers' drinking, psychological, stressor, and resource indices at the 1-year follow-up. We then used the children's variables at 1 and 3 years to predict parental outcomes at 3 and 8 years, respectively. These correlations

controlled for participants' baseline marital status (married vs. never married, separated, divorced, widowed), the number of alcoholism treatment episodes (between baseline and the follow-up at which the outcome was assessed), and the baseline value of the outcome under consideration; they did not control for the outcomes that were not under consideration. Generally, being married, receiving more treatment, and having less severe problems at baseline were associated with better drinking and psychological outcomes.

RESULTS

Comparing Mothers and Fathers

CHILDREN'S HEALTH AND RELATIONSHIPS

At baseline and 1 year, there were no differences between children of mothers and fathers with respect to their health status and child–parent relationships (Table 1). At 3 years, in comparison to children of alcoholic fathers, children of alcoholic mothers had more health problems and were more likely to have been hospitalized. Even so, mothers reported being more satisfied with their relationships with their children. No differences occurred at 8 years between children of women and men alcoholics.

PARENTS' DRINKING

There were also relatively few differences between mothers and fathers on drinking indices (Table 2). At baseline, mothers reported more dependence symptoms and less confidence in resisting alcohol; mothers also reported more dependence at 3 years. By the 8-year follow-up, mothers and fathers did not differ on dependence symptoms; and, in fact, mothers consumed less alcohol and spent fewer days intoxicated.

PARENTS' PSYCHOLOGICAL STATES

Although on the whole mothers were not worse off than fathers on drinking patterns at baseline, they were worse off on psychological states at baseline (Table 2). Specifically, mothers scored higher on depressed mood and had lower self-esteem. As Table 2 shows, the differences between mothers and fathers on depressed mood and self-esteem were also found at the 1- and 3-year follow-ups.

PARENTS' STRESSORS AND RESOURCES

Mothers had fewer spouse/partner resources at baseline than did fathers (mothers' $M = 25.98$, fathers' $M = 28.72$; $t = 2.21$, $p < .05$). Consistent with these results, mothers also had more spouse/partner stressors at the 1-year follow-up (mothers' $M = 9.28$, fathers' $M = 7.57$; $t = 2.86$, $p < .01$).

PARENTS' TREATMENT

We compared mothers and fathers on how much treatment they received for their alcohol use disorders between follow-ups. At 1 and 3 years, mothers and fathers did not differ on the amount of inpatient or outpatient treatment or on how many AA meetings they had participated in. Between 3 and 8 years, no differences occurred on inpatient or

TABLE 1
Health Status and Child–Parent Relationships Among Children of Alcoholic Parents

	Child Health Status		*Child–parent Relationships*	
	Percent with Health Problems	*Percent Hospitalized*	*Stressors*	*Satisfaction*
Baseline				
Mothers (N = 146)	20	8	8.10	3.06
Fathers (N = 113)	20	5	6.80	2.83
t	0.01	1.04	1.68	1.81
1 Year				
Mothers (N = 146)	20	4	8.80	3.22
Fathers (N = 113)	19	9	7.55	3.04
t	0.14	1.52	1.28	1.54
3 Years				
Mothers (N = 129)	25	12	7.94	3.25
Fathers (N = 96)	15	4	6.93	2.98
t	1.96*	2.16*	1.17	2.13*
8 Years				
Mothers (N = 120)	22	12	8.18	3.33
Fathers (N = 102)	17	5	7.73	3.10
t	0.92	1.87	0.48	1.79

Notes. When the Bonferroni method is applied to consider that two comparisons on child health and two comparisons on child–parent relationships were conducted on each occasion, $p = .03$. The t-tests conducted on children's health problems and hospitalization, and child–parent relationship satisfaction, between all mothers (N = 146) and fathers (N = 119) who completed questionnaires at 3 years, meet this more conservative criterion for significance.
*$p < .05$.

AA participation, but mothers had more outpatient treatment (mothers' $M = 21.4$ sessions, fathers' $M = 6.0$; $t = 2.39$, $p < .05$).

Children's Health and Child–Parent Relationships as Predictors of Parents' Adaptation

DOES CHILDREN'S HEALTH PREDICT MOTHERS' ADAPTATION?

The first set of partial correlations used children's health problems or children's hospitalization at baseline to predict mothers' outcome indices at 1 year, and were based on the 146 mothers surveyed at both baseline and 1 year. Children's health problems at baseline did not predict mothers' drinking and psychological states (Table 3) or their stressors and resources (not tabled) 1 year later. Mothers whose children had been hospitalized in the year prior to the baseline assessment had more dependency symptoms and less confidence about resisting alcohol (Table 3) at the 1-year follow-up.

The next set of partial correlations used children's health status at 1 year to predict mothers' adaptation at 3 years, and was based on the 129 mothers surveyed at both 1 and 3 years. Children's health status at 1 year predicted mothers' drinking, psychological states, and spouse stressors and resources 2 years later. As shown on Table 3, children with more health problems had mothers with heavier drinking patterns, more drinking problems, more dependency symptoms, less confidence to resist alcohol, and more

TABLE 2
Mothers' and Fathers' Drinking and Psychological States

	Drinking						Psychological States	
	Alcohol Consumption	*Days Intoxicated*	*Heavy Drinking*	*Drinking Problems*	*Alcohol Dependence*	*Confidence to Resist*	*Depression*	*Self-esteem*
Baseline								
Mothers	7.88	13.66	17.24	10.88	12.77	58.46	24.17	14.48
Fathers	8.81	13.71	17.76	11.31	10.51	65.29	19.72	17.49
t	0.84	0.04	0.68	0.47	2.09*	2.10*	4.17**	4.30**
1 Year								
Mothers	1.90	2.19	6.42	3.81	4.05	79.74	15.36	18.68
Fathers	2.18	3.46	6.56	3.71	3.25	81.30	13.09	20.43
t	0.45	1.60	0.14	0.13	0.96	0.52	2.19*	2.38*
3 Years								
Mothers	1.25	2.00	5.19	3.27	4.01	80.47	14.54	19.43
Fathers	1.48	1.98	5.70	2.74	2.14	83.03	12.36	21.19
t	0.52	0.03	0.53	0.70	2.26*	0.77	2.08*	2.37*
8 Years								
Mothers	1.11	1.73	5.18	2.24	3.17	86.57	14.10	20.35
Fathers	2.90	3.95	6.56	2.96	3.18	83.06	12.43	20.98
t	2.27*	2.38*	1.38	1.08	0.01	1.17	1.58	0.86

Notes. *$p < .05$.
**$p < .001$.

TABLE 3

Partial Correlations Controlling for Marital Status, Treatment, and Baseline Value of Outcome, Using Children's Health Status and Child–parent Relationships to Predict Mothers' Subsequent Drinking and Psychological States

	Drinking at Subsequent Follow-up						*Psychological States*	
	Alcohol Consumption	*Days Intoxicated*	*Heavy Drinking Pattern*	*Drinking Problems*	*Dependency Symptoms*	*Confidence to Resist Alcohol*	*Depressed Mood*	*Self-esteem*
Baseline								
Children's health								
Health problems	−0.01	−0.05	0.06	0.03	0.05	−0.06	0.12	−0.06
Hospitalized	0.05	0.09	0.10	0.05	0.20**	*−0.25****	0.08	−0.03
Child–parent relationships								
Stressors	0.21	*0.29***	0.19	0.07	0.13	−0.17	*0.32****	−0.17
Satisfaction	*−0.29****	*−0.33****	*−0.27****	*−0.23****	*−0.17**	0.14	*−0.28****	0.16*
1 Year								
Children's health								
Health problems	0.08	0.13	*0.21***	*0.26****	*0.24****	*−0.21***	*0.24***	−0.10
Hospitalized	0.15	−0.02	0.16	*0.25****	*0.30****	−0.06	0.05	0.02
Child–parent relationships								
Stressors	0.18	0.07	0.14	0.21	0.19	−0.20	0.23*	*−0.25**
Satisfaction	*−0.19**	*−0.20**	*−0.32****	−0.23**	*−0.22***	*0.29****	−0.19*	0.13

Notes. When the Bonferroni method is applied to consider that six comparisons were conducted on drinking indices on each occasion, $p = .008$; considering that two comparisons were conducted on psychological indices on each occasion; $p = .03$. Italics indicate that the correlation for mothers differs significantly ($p < .05$) from the corresponding correlation for fathers; underlines indicate a marginally significant difference ($p < .10$).

*$p < .05$.

**$p < .03$.

***$p < .008$.

depression; these mothers also had more spouse stressors ($r = .24$, $p < .05$) and fewer spouse resources ($r = -.25$, $p < .03$). Children's hospitalization in the year prior to the 1-year follow-up was associated with more drinking problems and more dependency symptoms among mothers at 3 years (Table 3).

In the next set of partial correlations, children's 3-year health status was used to predict mothers' 8-year adaptation among the 120 mothers surveyed at both 3 and 8 years. Children's health status at 3 years was not predictive of mothers' drinking or psychological states at 8 years.

DO CHILD–PARENT RELATIONSHIPS PREDICT MOTHERS' ADAPTATION?

To conduct partial correlations between child–parent relationships and mothers' adaptation, we followed the same strategy we used for the analyses involving children's health. That is, we controlled for mothers' marital status, number of alcoholism treatment episodes, and the baseline value of the outcome under consideration. More child-related stressors at baseline were associated with more days intoxicated and symptoms of depression among mothers at 1 year (Table 3). In contrast, when mothers were more satisfied with their relationships with their children at baseline, at 1 year they reported consuming less alcohol, spending fewer days intoxicated, and having a lighter drinking pattern, fewer drinking problems, fewer symptoms of dependency and depression, and more self-esteem (Table 3).

More child stressors at 1 year predicted more depression and less self-esteem among mothers at 3 years (Table 3). Mothers' satisfaction with their relationships with their children at 1 year was related to consuming less alcohol, spending fewer days intoxicated, having a lighter drinking pattern and fewer drinking problems, less dependency, more confidence to resist alcohol, and fewer symptoms of depression at 3 years (Table 3).

More child–parent relationship stressors at 3 years were associated with more depression ($r = .26$, $p < .03$) and lower self-esteem ($r = -.28$, $p < .03$) among mothers at 8 years. More relationship satisfaction at 3 years was related to less alcohol consumption ($r = -.33$, $p < .008$), more confidence to resist alcohol ($r = .20$, $p < .03$), and more self-esteem ($r = .27$, $p < .008$) 5 years later.

DO CHILDREN'S HEALTH AND PARENT–CHILD RELATIONSHIPS PREDICT FATHERS' ADAPTATION?

Partial correlations were used to examine the extent to which children's health and parent–child relationships predicted fathers' adaptation, in the same way as for mothers. Children's health problems at baseline did not predict fathers' drinking, psychological states, stressors, or resources at 1 year; when children were hospitalized, fathers consumed more alcohol ($r = .28$, $p < .008$) 1 year later. Unexpectedly, child hospitalizations at 3 years were associated with more paternal self-esteem at 8 years ($r = .22$, $p < .05$).

Child–father relationship satisfaction at baseline and 1 year was not predictive of subsequent outcomes. More child stressors at 3 years were associated with more alcohol consumption ($r = .33$, $p < .05$) and drinking problems ($r = .33$, $p < .05$) at 8 years. Surprisingly, more child stressors at baseline were related to more confidence 1 year later ($r = .50$, $p < .008$).

ARE CHILD–MOTHER LINKS STRONGER THAN CHILD–FATHER LINKS?

The last set of analyses examined whether associations of children's health and child–parent relationships with mothers' adaptation were stronger than those involving fathers' adaptation. Specifically, each partial correlation that was significant for mothers was compared to the corresponding partial correlation for fathers, using the *z*-test of the difference between independent correlations (Glass and Hopkins, 1984). Table 3 shows that, generally, associations of child health and relationships at baseline or 1 year with parents' drinking and psychological outcomes at the subsequent follow-up were stronger for mothers than for fathers. Not shown on Table 3 are two additional sets of findings. First, the *z*-tests determined that all of the partial correlations successfully predicting 8-year mother outcomes from the 3-year child health and relationship indices (i.e., depressed mood and self-esteem from child relationship stressors; alcohol consumption, confidence to resist alcohol, and self-esteem from child relationship satisfaction) were significantly stronger ($ps < .05$) than the corresponding partial correlations for fathers. Secondly, *z*-tests determined that partial correlations between children's health problems at 1 year and marital stressors and resources at 3 years were significantly ($ps < .001$) stronger for mothers than for fathers.

DISCUSSION

Generally, over an 8-year period beginning when parents initially made contact with treatment services, the children of alcoholic mothers and fathers were comparable on their health status and relationships with their parents. The severity of mothers' and fathers' drinking problems were also generally comparable over this period, but mothers fared more poorly in other areas. Children's better health and child–parent relationships, particularly more satisfying relationships, were consistent predictors of mothers' reduced drinking and better psychological states on subsequent occasions. There were fewer and less consistent associations between child functioning and fathers' adaptation.

Do Children of Alcoholic Mothers and Fathers Differ?

On the whole, children of women and men problem drinkers were similar on their health status and child–parent relationships. The exception was that children of alcoholic mothers had more health problems and were more likely to have been hospitalized at the 3-year follow-up; children of alcoholic mothers also had more satisfying child–parent relationships. Reports of poorer health of children of alcoholic mothers may reflect, to some extent, the tendency for women to evaluate their own health more negatively, and to report more symptoms, in comparison to men (Anson et al., 1993).

Our results are consistent, however, with the conclusions of Werner (1986) that the risk for serious learning and behavior problems is greater among offspring of alcoholic mothers than among offspring of alcoholic fathers. Another study reported that children's odds of having behavioral problems were increased more for maternal than for paternal alcoholism (Dawson, 1992), although this difference disappeared when

socio-demographic characteristics were considered. Bijur et al. (1992) found that children of women who were problem drinkers, but not children of problem-drinking men, had an elevated risk of serious injury (i.e., injuries resulting in hospitalization and surgical treatment), in comparison to non-problem drinkers.

Importantly, most research on children of alcoholic parents has focused on the offspring of alcoholic fathers rather than mothers. Our findings, along with the others cited, indicate that the focus on fathers may somewhat underestimate the health risks to children entailed by having an alcoholic mother. Because women tend to be the primary caretakers of children, problem-drinking by mothers may be more hazardous to children's physical and emotional health than problem-drinking by fathers (see Room, 1996). In addition, women's drinking may be more socially stigmatizing than men's (Beckman and Amaro, 1986), and, therefore, more damaging to children's psychosocial development. Furthermore, in our sample, the problem-drinking mothers were more likely than fathers to have symptoms of depression; maternal depression is a risk factor for children's health problems, such as internalizing and externalizing disorders (Cummings and Davies, 1994).

Do Problem-Drinking Mothers and Fathers Differ?

For the most part, the mothers and fathers were similar on their drinking patterns. The mothers' drinking problems were moderately more severe at the time of first contacting treatment services, as indicated by their higher alcohol dependence and lower confidence about resisting alcohol at baseline. Women alcoholics have more symptoms of alcohol dependence than do alcoholic men (Farid and Clarke, 1992; Ross, 1989). The greater degree of dependence may reflect the quicker progression among women between early problem-drinking and late-stage symptoms (Hasin et al., 1988; Piazza et al., 1989; Ross, 1989). Because more alcohol dependence at intake to treatment predicts poorer short-term outcomes (Benishek et al., 1992), mothers' high dependence scores may indicate a need for more intensive treatment.

In the long term, both mothers and fathers improved considerably on the drinking indices, but mothers were somewhat better off, as shown by their lower alcohol consumption and fewer days spent intoxicated at the 8-year follow-up. Studies of short-term outcomes also have found improvement on drinking indices among both women and men (Benishek et al., 1992). Mothers' moderately better long-term drinking outcomes may have been due in part to their having received more outpatient treatment in the last 5 years of follow-up.

Clearly, mothers had poorer psychological states than did fathers; as mentioned, they had more symptoms of depression as well as lower self-esteem at baseline, 1 year, and 3 years. Women generally have higher rates of depression than do men, and this appears to be true among women and men problem drinkers. Alcohol abusing women are as much as four times more likely than men to report depressive symptoms, even when the women and men have comparable drinking problems (Benishek et al., 1992; Del Boca and Hesselbrock, 1996). Several studies suggest that women alcoholics have especially poor self-concepts and low self-esteem (see Beckman, 1975); however, Douglas and Nutter (1986) found no difference on self-esteem between women and men upon their admission to an inpatient treatment facility for alcoholism. Psychologically, mothers were doing as

well as fathers at the 8-year follow-up, which supports the idea that efforts at recovery may have benefits beyond reduced drinking.

Children's Functioning and Parents' Adaptation

When children were in poorer health (i.e., had more health problems and hospitalizations), mothers had more severe drinking problems (in particular, more alcohol dependence) and symptoms of depression 1 or 2 years later, even when marital status, treatment amounts, and baseline values of the outcomes were controlled. Children's health problems also predicted mothers having more spouse stressors and fewer spouse resources 2 years later.

More satisfying child–parent relationships were consistently related to better drinking and psychological outcomes for mothers. For example, more satisfaction among mothers predicted spending fewer days intoxicated and having a lighter drinking pattern, fewer drinking-related problems, and less depression 1 and 2 years later, and less alcohol consumption, more confidence to resist alcohol, and more self-esteem 5 years later. Child stressors were also related to mothers' drinking and psychological outcomes, but less consistently. Specifically, more stressors in the child–parent relationship were associated with spending more days intoxicated and having less self-esteem on subsequent follow-ups.

Dumka and Roosa (1993) similarly reported that positive mother–child relationships contributed substantially to mothers' personal adjustment. They suggested that mothers who make an investment in their relationships with their children might also be making an investment in themselves. Alternatively, mothers who manage to protect their relationships with their children from the possible debilitating effects of alcoholism may simultaneously be striving toward recovery.

Generally, there were fewer associations between child functioning and fathers' adaptation than between child functioning and mothers' adaptation. Regarding children's health status, higher hospitalization rates at baseline were associated with more paternal alcohol consumption at 1 year. However, an unexpected association showed child hospitalization at 3 years to be related to more self-esteem at 8 years. Perhaps the fathers' ability to deal with a child's illness or injury, in the context of efforts at recovery, contributed to their enhanced self-esteem. This explanation may also apply to child–father stressors at baseline predicting more paternal confidence: perhaps, attempts to handle the stressors in conjunction with seeking help for drinking gave fathers more certainty about managing the situations putting them at risk for relapse. In line with our main hypotheses, fewer child stressors at 3 years were associated with less alcohol consumption and fewer drinking-related problems 5 years later.

Dumka and Roosa (1995) also found that, in contrast to the case for mothers, child–father relationships had little effect on fathers' adjustment. Apparently, different processes influence problem-drinking for fathers and mothers, in that mothers' drinking and psychological states were influenced more strongly by children's health and child–parent relationships than was true for fathers. This conclusion is also supported by Cronkite and Moos' (1984) finding that wives consumed more alcohol and functioned more poorly when their husbands' functioning was impaired and their families were less supportive; in contrast, wife and family functioning did not affect the

husband's drinking or functioning. In general, social support is more related to mothers' than to fathers' functioning (Billings and Moos, 1981), and social and environmental circumstances seem to play a greater role in the origin of alcoholism among women than among men (Beckman, 1975).

Differences in the processes associated with problem-drinking suggest the need for different intervention strategies for mothers and fathers. For mothers, intervening with the family to improve children's physical and mental health and strengthen mothers' parental relationships may prove effective. Family-oriented interventions may be especially important for problem-drinking mothers, because women are more likely than men alcoholics to have an alcoholic spouse (McCrady, 1990). In fact, it is possible that the additional difficulties posed by having an alcoholic father and husband may have contributed to both children's and mothers' dysfunction in this study. In any case, our findings suggest that interventions for fathers might best focus more directly than those for mothers on alleviating problem-drinking. More research is needed to explain why, when child-related difficulties do influence paternal drinking, fathers' responses may vary from increased alcohol consumption to increased self-confidence.

Modeling Relationships Between Child Well-Being and Parental Drinking

Future research should also examine more complex process models that include mediating and moderating factors in the relationship between child functioning and mothers or fathers' problem-drinking. Some guidance is provided by process models of the effects of parental alcoholism or other psychiatric disorders on children's functioning. For example, child temperament, parenting quality, and negative life events have been found to mediate relationships between parental dysfunction and child outcomes (Chassin et al., 1996; Chassin et al., 1993; Dumka and Roosa, 1993, 1995; Roosa et al., 1993). The model of Webster-Stratton (1990) identifies extra-familial stressors such as negative life events, as well as child and marital stressors, as determinants of disrupted parenting, which in turn increases the likelihood that children develop psychosocial difficulties.

Disrupted parenting (i.e., irritable, critical, and abusive behaviors; Webster-Stratton, 1990) and parental stressors (i.e., stressors associated with the child's temperament, and with the parent's perception of the parenting role, such as perceived restrictions and sense of competence; Loyd and Abidin, 1985) may be important mediators to consider in models predicting parental drinking from child functioning. That is, a child's medical problems, for example, may cause parents to feel rejecting toward the child and distressed in the parenting role. In line with theories of the stress dampening response (Stritzke and Lang, 1996), parents may drink to reduce parenting distress and to improve their negative mood.

Findings that mothers may be more vulnerable to parenting stressors than are fathers, help to explain why the relationship between child functioning and parent outcomes may be stronger among mothers than among fathers. Studies have shown that child morbidity is related to mothers' but not to fathers' parenting distress (Baker and Heller, 1996; Frank et al., 1991; Ostberg, 1998). Process models might examine the hypothesis that children's physical and psychosocial health status affects mothers', but not fathers', drinking and psychological states via the mediating factor of parenting stressors. Other studies suggest

that fathers may be more punitive and controlling toward children with health problems (DeKlyen et al., 1998; Girolametto and Tannock, 1994), but, as previously discussed, poor quality interactions within the family may be weak predictors of fathers' drinking problems. Process models examining determinants of fathers' drinking behavior may more appropriately focus on the extra-familial stressors highlighted in the model of Webster-Stratton (1990), such as negative events including job loss and economic hardships (Hilton and Clark, 1991).

Limitations and Conclusions

The major limitation of this study was that the problem-drinking mothers and fathers reported on both the children and themselves. More confidence will be placed in the results when they are replicated using children's reports of their health and relationships with their parents, or using clinicians' reports of children's functioning, as well as of parental drinking, and psychological states, or using one parent's reports on children to predict the other parent's ratings of his or her own drinking and psychological states. Dawson (1992) found that associations between child behavior problems and severity of parental problem-drinking were comparable whether the problem or non-problem-drinking parent evaluated the child. In this regard, Rubio-Stipec et al. (1991) found stronger relationships between children's behavior problems and parental alcoholism when youths were the informants than when the informants were parents or psychiatrists. Parents and clinicians may have tended to underreport children's problems because the youths purposely withheld pertinent information. These findings suggest that our results may underestimate associations between child status and parental drinking and psychological outcomes rather than falsely inflate them. On the other hand, it is possible that the magnitude of associations based solely on parents' reports were somewhat overestimated because of the non-independence of the data.

Another caveat in interpreting the results is that, because we do not know whether child dysfunction or parental problem-drinking occurred first, the data cannot distinguish conclusively between initial cause and effect. In our analyses, child problems were assessed temporally prior to parental drinking and psychological indices, and parents' stability in terms of these indices was taken into account. Even so, it is possible that the apparent effect of children's well-being on parents' adaptation reflects the more temporally antecedent effects of parents' adaptation on their children.

In conjunction with research demonstrating the harmful effects of parental drinking on children, our results support the possibility that an undesirable cycle within the family might be established in which parental drinking, particularly maternal drinking, and children's dysfunction coexist in an ever-worsening reciprocal relationship. Dealing with a child's ill health and a stressful mothering relationship is an upsetting and frustrating situation that may be associated with increases in drinking problem severity among mothers. In turn, mothers' drinking may be associated with children's injuries and psychosocial problems and be detrimental to child–parent relationships; these difficulties create more upset and frustration for the mother that serve as a further impetus to drink. On the brighter side, our findings also suggest that when children and child–mother dyads continue to function well despite the mother's drinking, such positive functioning may be an important contributor to maternal recovery.

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